

United States Government

Department of Energy

Bonneville Power Administration

# memorandum

DATE: February 19, 2002

REPLY TO  
ATTN OF: KEP-4

SUBJECT: Supplement Analysis for the Transmission System Vegetation Management Program FEIS  
(DOE/EIS-0285/SA-39)

TO: William T. Erickson - TFP/Walla Walla  
Natural Resource Specialist

**Proposed Action:** Vegetation Management along the Allston-Keeler 500 kV Transmission Line ROW lands between 1/1 through 29/1, excluding BLM lands. The proposed work will be accomplished in the indicated sections of the transmission line corridor with an average corridor width of 150 feet.

**Location:** The ROW is located in Washington and Columbia County, in the State of Oregon, Olympia Region.

**Proposed by:** Bonneville Power Administration (BPA).

**Description of the Proposed Action:** BPA proposes to clear unwanted vegetation in the rights-of-ways and around tower structures that may impede the operation and maintenance of the subject transmission lines and access roads, including Reclaim and Danger Trees. BPA plans to conduct vegetation control with the goal of removing tall growing vegetation that is currently or will soon be a hazard to the transmission line. BPA's overall goal is to have low-growing plant communities along the rights-of-way to control the development of potentially threatening vegetation. All work will be executed in accordance with the National Electrical Safety Code and BPA standards. Work is to begin in March 2002.

**Analysis:** This project meets the standards and guidelines for the Transmission System Vegetation Management Program Final Environmental Impact Statement (FEIS) and Record of Decision (ROD). The Planning steps are described in Attachment 1, Checklist.

- Mechanical treatment will remove danger trees and taller vegetation to encourage low-growing plant communities to establish themselves and flourish on the right-of-way.
- Vegetation herbicide treatments on sprouting-types of species ensure that the roots are killed. Prevention of re-sprouts encourages low-growing plant communities to establish themselves and flourish on the right-of-way.
- Water resources (streams, rivers, wetlands and well) will be protected with shown in Attachments 1 and 2.
- No 'in stream' work is to take place without prior consultation with the appropriate government agencies and permits are in place.

- Herbicides will be applied by licensed applicators following manufacturers' label instructions and BPA's management prescriptions.
- Re-seeding /re-planting regimes have been identified. (See Attachment 1, Checklist.)
- BLM was consulted and mitigations are in place for adjacent BLM lands. (See Attachment 2.)
- The Grande Ronde Tribe and ODF were contacted by letter and phone. No concerns were expressed. Private landowners have been contacted and mitigations are in place. (See Attachment 1, Checklist.)
- Marbled Murrelet and/or Spotted Owl habitat may be present (currently un-surveyed) on adjacent BLM lands. Timing mitigation has been incorporated into the checklist in accordance with the FEIS and ROD. (See Attachment 1, Checklist.)

This Supplement Analysis finds that 1) the proposed actions are substantially consistent with the Transmission System Vegetation Management Program FEIS (DOE/EIS-0285) and ROD, and; 2) there are no new circumstances or information relevant to environmental concerns and bearing on the proposed actions or their impacts. T&E fish and wildlife are not affected, with implementation of the attached mitigation measures therefore, no formal consultation is required.

/s/ Mark W. Hermeston

Mark W. Hermeston – KEP-4  
Physical Scientist (Environmental)

CONCUR: /s/ Thomas C. McKinney  
Thomas C. McKinney  
NEPA Compliance Officer

DATE: 2/20/02

Attachments

# Vegetation Management Checklist

## 1. IDENTIFY FACILITY AND THE VEGETATION MANAGEMENT NEED

### 1.1 Describe Right-of-way.

The subject corridor traverses residential, rural, grazing lands, industrial forestlands and State Department of Forestry lands. The vegetation is of moderate density with the average height being less than 14 feet tall. The site has the potential of being treated with basal stem treatments. The managed right-of-way width will is 150 feet.

Corridor Name	Corridor Length & kV	Easement width	Miles of Treatment
Keeler Allston 1/1 to 29/1	43 miles 500 kV	150	24 5/1 to 29/1

EXCLUDING BLM LANDS. Stations include

BLM LANDS 8/4+279 to 9/2+63, 13/3+532 to 13/3+1605, 16/1+949 to 16/3+1205, 17/3+129 to 18/1+250, 18/2+1266 to 18/3+471,
18/5+872 to 19/2+797, 19/5+168 to 20/1+397, 20/2+223 to 21/3+1297, 22/4+695 to 23/4+600,
25/1+622 to 25/2+304, 26/2+456 to 27/4+790

See Handbook — [List of Right-of-way Components](#) for checkboxes and the requirements for the components [Rights-of-way](#), [Access Roads](#), [Switch Platforms](#), [Danger Trees](#), and [Microwave Beam paths](#).

Right Of Way:

Right-of-Way – clearing in right-of-way

Transmission Structures – clearing around

Access Road clearing - approximate miles – up to 35 acres

Reclaim (“C”) Trees

Danger Tree clearing- future

### 1.2 Describe the vegetation needing management.

See handbook — [List of Vegetation Types](#), [Density](#), [Noxious Weeds](#) for checkboxes and requirements.

Vegetation Types:

Douglas Fir-Conifers

Alder

Popular

Wild Cherry

Noxious Weeds - Tansy ragwort scotch broom as needed

Blackberries

Poison Oak

Density:

High (250 + stems/per acre)

**1.3 List measures you will take to help promote low-growing plant communities. If promoting low-growing plants is not appropriate for this project, explain why.**

See Handbook — [Promoting Low-Growing Plant Communities](#) for requirements and checkboxes.

Tall-growing vegetation that is currently or will soon be a hazard to the line will be removed. (In places where tall growing vegetation must be left in place, it may not be possible to promote low-growing plants.)

Cut-stump or follow-up herbicide treatments on re-sprouting-type species will be carried out to ensure that the roots are killed.

Vegetation that will grow tall will be selectively eliminated *before* it reaches a height or density to begin competing with low-growing species. [This is done for maintenance of already controlled rights-of-way. This should be done when the saplings are very young.]

Desirable low-growing plants will not be disturbed. Only selective vegetation control methods that have little potential to harm non-target vegetation will be used.

**1.4 Describe overall management scheme/schedule.**

See Handbook - [Overall Management Scheme/Schedule](#).

**Description of the Proposed Action:** BPA proposes to clear unwanted vegetation in the rights-of-ways and around tower structures that may impede the operation and maintenance of the subject transmission line. Also, access road clearing will be conducted. All work will be in accordance with the National Electrical Safety Code and BPA standards. BPA plans to conduct vegetation control with the goal of removing tall growing vegetation that is currently or will soon be a hazard to the transmission line. BPA's overall goal is to have low-growing plant communities along the rights-of-way to control the development of potentially threatening vegetation. All tall growing tree species over 1 foot tall.

In addition, listed noxious weeds are present in the ROW. A cooperative effort to control noxious weeds is also proposed. Tansy ragwort, scotch broom and knapweed have been a concern. These weeds and other listed noxious weeds are non-native species that need to be controlled to prevent any additional spread of these weeds and encroachment of habitat for native species on the right-of-way. These noxious weed species will be controlled using an Integrated Vegetation Management Approach (IVM) using a combination of manual, mechanical herbicides, and biological methods.

The width of the ROW easement is 150 feet. All work will be accomplished by selective and non-selective vegetation control methods to assure that there is little potential harm to non-target vegetation and to low-growing plants. The work will provide system reliability.

**Initial entry –**

Brush management on the ROW work will be to clear tall growing vegetation that is currently or will soon pose a hazard to the lines; treat the associated stumps and re-sprouts with herbicides (spot and localized treatments) to ensure that the roots are killed preventing new sprouts and selectively eliminating tall growing vegetation before it reaches a height or density to begin competing with low-growing vegetation. Areas may be replanted or reseeded with low-growing vegetation if there is limited vegetation to re-establish the site. Desirable low-growing plants will not be disturbed on the right-of-way by using selective control methods, and by keeping trucks and equipment on designated access roads and trails. All work will take place in existing rights-of-ways. Slash and debris will be lopped and scattered.

Danger Trees are currently being marked and identified.

Access roads and Tower sites will be treated using selective and non-selective methods that include, hand cutting, mowing, and herbicide spot, localized and broadcast applications including cut stubble and localized granular treatments

Noxious Weeds- The selection of methods and herbicides for noxious weed management will be based on their location and proximity to water resources. Treatment will be limited to Spot, localized and ground broadcast treatments. Non-selective treatments using ground broadcast treatment may be required in areas of high infestation of weeds on the ROW, and access roads and tower sites. Localized Granular treatments will also be considered.

### **Subsequent entry**

In the near future, Danger trees that are off of right-of-way and are potentially unstable and will fall within a minimum distance or into the zone where the conductor swing will be cut. Trees that are an imminent hazard (emergency) will be removed when identified. The danger tree process requires a survey of the trees by a specialized BPA crew that identifies hazard trees along the ROW, marks them, appraises the trees, and negotiates with the landowner on the details of falling the tree. The tree remains the property of the landowners.

The vegetation management program will be designed to provide a 3-8 year maintenance free interval. The overall vegetation management scheme will be to initially clear and remove all tall rowing trees using a combination of manual, mechanical, and herbicide treatments as outlined in the initial treatment

### **Future cycles -**

Future cycles of work will involve cut stump, basal treatments, or tree cutting. During routine patrols, the ROW will be examined for edge and danger trees with appropriate actions taken

## **2. IDENTIFY SURROUNDING LAND USE AND LANDOWNERS/MANAGERS**

### **2.1 List the types of landowners and land uses along your corridor.**

See Handbook — [Landowners/Managers/Uses](#) for requirements, and [List of Landowners/Managers/Uses](#) for a checkbox list.

Landownership ranges from managed state and Federal forests to rural/urban settings with 5-10 acres lots on and adjacent to the right of way.

Landowners/Managers/Uses:

Rural

Agricultural

Grazing lands

Industrial Forest lands

BLM [Salem District Office, Tillamook Resource Area](#)

State/City/County Lands [\[Oregon Department of Forestry\]](#)

**Describe method for notifying right-of-way landowners and requesting information (i.e., doorhanger, letter, phone call, e-mail, and/or meeting). Develop landowner mail list, if appropriate.**

See Handbook — [Methods for Notification and Requesting Information](#) for requirements.

Letters were sent out to landowners. Some were returned and re-sent. There are approximately 10 letters with no contact. The State Department of Forestry was consulted. No issues or concerns were brought forth by ODF. In addition, homes within 200 feet of the ROW will be contacted 2 days prior to treatments. The Tillamook BLM Resource office of the BLM has also been consulted.

Contacts BLM Katrina Symonds 503 815-1141

Eric Marcy State of Oregon 503 395-7432

**2.3 List the specific land owner/landuse measures — determined from the handbook or through your consultations with the entities — that will be applied.**

See handbook — [Requirements and Guidance for Various Landowners/Uses](#) for requirements and guidance, also [Residential/Commercial](#), [Agricultural](#), [Tribal Reservations](#), [FS-managed lands](#), [BLM –managed lands](#), [Other federal lands](#), [State/ Local Lands](#).

#### Requirements

- **When facilities cross state or local agency lands, notify, and cooperate with those entities (such as State Parks or county lands) prior to vegetation control activities, as appropriate.**

No specific measure are needed or requested.

**2.4 Review any existing landowner agreements (e.g. tree/brush Permits or Agreements). List in table above any provisions that need to be followed and where they are located.**

See handbook — [Landowner Agreements](#) for requirements.

The following landowners have responsibility for vegetation maintenance. (Identify spans where BPA doesn't cut due to landowner agreements — Christmas tree farm, orchard, etc.)

Span		Landowner	Agreement ID number (?)
To	From		
7/1	7/2	Fred Van Raden 503 621-3995 14501 NW Rock Creek Road Portland OR, 97231	39577 Landowner has Spanned canyon area over Lake. Call in concern about tree cutting. Consult with owner before any tree management
		Tom Hodgeson 22523 NW 220 <sup>th</sup> Portland OR, 97231	Has lock on gate. Need to contact him for access. 503 621-3512

If landowners have houses or facilities within 200 feet of the Right-of-way, the contractor will contact them in person or leave a door hanger at the facility within two days before treatment.

**2.5 List any known casual informal use of the right-of-way by non-owner publics. List any constraints or measure's to take due to the informal use.**

See handbook — [Casual Informal Use of Right-of-way](#) for requirements.

None

Landowners and adjacent landowners are users. State lands are open to the public. The rest is locked up by the landowners.

**2.6 List other potentially affected people, agencies, or tribes (that are not landowners/managers) that need to be notified or coordinated with. Describe method of notification and coordination.**

See handbook — [Other Potentially Affected Publics](#) for requirements and suggestions.

Contacted Grande Ronde Tribe. By letter and Phone. No issues were expressed

### 3. IDENTIFY NATURAL RESOURCES

See Handbook — [Natural Resources](#)

**3.1 List any water resources (streams, rivers, lakes, wetlands) that may be impacted by vegetation control activities. For each water body describe the control methods and requirements or mitigation measures that will be used.**

See Handbook — [Water Resources](#) for requirements for working near water resources including buffer zones.

LOCATION			(1)	(2)	(3)	CODE		
STR. NO.	FROM	TO	WIDTH	LENGTH	ACRES			
7/1	1050	1300	150.0	250	0.9	T&E		Rock Creek Lake Van Raden
9/3	0	472	150.0	472	1.6	Y		INTERMITTENT WATER AT

LOCATION			(1)	(2)	(3)	CODE		
STR. NO.	FROM	TO	WIDTH	LENGTH	ACRES			
								DRAWS
9/4	0	1350	150.0	1350	4.6	Y		INTERMITTENT WATER AT DRAWS
10/2	0	1150	150.0	1150	4.0	Y		INTERMITTENT WATER AT DRAWS
10/4	0	1661	150.0	1661	5.7	Y		INTERMITTENT WATER AT DRAWS
11/3	875	1650	150.0	775	2.7	T&E	2.7	
12/4	575	1220	150.0	645	2.2	T&E		T&E
13/4	0	1064	150.0	1064	3.7	A		INTERMITTENT WATER AT DRAWS
13/5	350	600	150.0	250	0.9	R		RIPARIAN
14/1	825	1125	150.0	300	1.0	T&E		T&E
14/2	0	1197	150.0	1197	4.1	A		INTERMITTENT WATER AT DRAWS
16/5	0	1390	150.0	1390	4.8	A		INTERMITTENT WATER AT DRAWS
17/1	0	500				T&E		T&E
17/1	500	1100	150.0	600	2.1	T&E		RIPARIAN T&E
17/1	1100	1447	150			T&E		T&E
17/2	0	796	150.0	796	2.7	T&E		INTERMITTENT WATER AT DRAWS T&E
17/3	0	129	150			T&E		T&E
22/3	650	1299	150.0	649	2.2	A		INTERMITTENT WATER AT DRAWS
22/4	0	695	150	695	2.4	A		INTERMITTENT WATER AT DRAWS
23/5	0	1461	150.0	1461	5.0	A		INTERMITTENT WATER AT DRAWS
24/1	0	1363	150.0	1363	4.7	Y		INTERMITTENT WATER AT DRAWS
24/2	1350	1450	150.0	100	0.3	T&E		R-T&E ZONE +100

#### BLM Identified Stream (18)

- |                  |           |           |                         |
|------------------|-----------|-----------|-------------------------|
| 1. Rock Creek    | 7/1       | Cutthroat | T&E                     |
| 2. Jackson Creek | 9/2       | Cutthroat | Spanned Canyon          |
| 3. E. Fork McKay | 10/3      | Steelhead | Spanned Canyon          |
| 4. Creek         | 11/2      | Steelhead | Spanned Canyon          |
| 5. Creek         | 11/3      | Cutthroat | Spanned Canyon          |
| 6. Creek         | 11/4      | Cutthroat | Spanned Canyon          |
| 7. Creek         | 12/4      | Steelhead | Spanned Canyon/T&E      |
| 8. Creek         | 13/1      | Cutthroat | Spanned Canyon          |
| 9. Creek         | 14/1      | Cutthroat | T&E                     |
| 10. Creek        | 14/4      | Cutthroat | Spanned Canyon          |
| 11. Creek        | 17/1-17/3 | Cutthroat | adjacent to the ROW T&E |
| 12. Creek        | 20/2      | Steelhead | Spanned Canyon T&E      |
| 13. Creek        | 20/3      | Cutthroat | Spanned Canyon          |
| 14. Creek        | 22/4      | Cutthroat | T&E                     |
| 15. Creek        | 24/2      | Coho      | Spanned Canyon          |
| 16. Creek        | 25/1      | Coho      | Spanned Canyon          |
| 17. Creek        | 26/6      | Cutthroat | Spanned Canyon          |
| 18. Kenusky      | 27/3      | Coho      | Spanned Canyon          |

## SALMON T&E STREAMS Code T&E on cut sheet

State and/or Private lands within 122 m (400 ft.) of a listed stream. Available: manual, mechanical, spot and localized herbicide, broadcast treatments, and biological treatments. No mechanical within 100 feet of streams except for tower sites and access roads.

**Manual:** Hand tools and chainsaws

**Mechanical:** None within 100 feet of stream. Except for Access Roads and Tower sites. On the Right-of-way, no ground disturbing activities within 400 feet from the stream.

**Herbicide:** From 0 to 100 feet away from water, use only Non-toxic formulations to moderately toxic (to aquatic species) formulations of glyphosate (such as Rodeo®), dicamba (Trooper/Vanquish), Escort, clopyralid, picloram, and 2-4-d using wick and spot-foliar treatments (localized) and ground broadcast treatments with handgun only. Highly Toxic and very Highly toxic (to fish) herbicides will not be used within 100 feet of a T&E Stream. Use appropriate buffers as described in the buffer table. Do not use herbicides with labeled with groundwater or surfacewater advisories. See Buffer Table on following page.

## Streams and Wetlands Code R on Cutsheet

State Forest or private lands, within 30.5 m (100 ft.) of a stream and wetland areas. Available: all manual and biological treatments

**Manual:** Hand tools and chainsaws

**Mechanical:** None, within 50 feet of streams or wetlands. Only on Access Roads and Tower sites

**Herbicide:** Formulations of slightly toxic (to aquatic species) formulations of glyphosate (such as Rodeo®), Imazapyr, 2,4-d, and triclopyr (Garlon 3A and Garlon 4) may be prescribed for wick, cut-stump, basal-stem, stem-injection, spot-foliar (localized), and ground broadcast treatments using appropriate buffers. In addition, Escort and clopyralid can be used for spot foliar and broadcast treatments. Broadcast treatments using handgun or ground broadcast can be completed with the appropriate buffers on noxious weeds, access roads and tower sites.

Do not apply any herbicide to wetlands when water is present.

HERBICIDE	BPA BUFFER Herbicide					
	Ground water Advisory	Surface Water Advisory	Highest Aquatic Toxicity Invertebrates/Vertebrates	Spot treat	Localized	Ground Broadcast
Transline Clopyralid	x		Practically Non Toxic	25 ft	35 ft	100 ft
2,4-d Dimethyl amine Salt	x		Practically Non Toxic	25 ft	35 ft	100 ft
Glypro/Accord						
Glyphosate			Practically Non Toxic	Up to edge	Up to edge	35 ft
2,4-d Dodecyl/amine salt	x		Slightly toxic	25 ft	35 ft	100 ft
Tordon 22K picloram	x	x	Moderately Toxic	25 ft	35 ft	100 ft
Vanquish dicamba	x	x	Slightly Toxic	25 ft	35 ft	100 ft
Escort			Practically Non Toxic	Up to edge	Up to edge	35 ft
Garlon 3A			Practically Non Toxic	Up to edge	Up to edge	35 ft
Garlon 4*			Highly Toxic	35 ft	100 ft	400 ft

### 3.2 If planning to use herbicides, list locations of any known irrigation source, wells, or springs (landowners maybe able to provide this info if requested).

See Handbook — [Herbicide Use Near Irrigation, Wells or Springs](#) for buffers and herbicide restrictions.

None Indicated

### 3.3 List below the areas that have Threatened or Endangered Plant or Animal Species and the name of the species, and any special measures that need to be taken due to their presence. Attach any BAs, T&E maps, or letters from US Fish and Wildlife.

See Handbook — [T&E Plant or Animal Species](#) for requirements and determining presence.



None Listed in Data Base except for T & E Steams which are addressed in the previous section.

### 3.4 List any other measures to be taken for enhancing wildlife habitat or protecting species.

See Handbook — [Protecting Other Species](#) for requirements.

LGPC concept will develop and improve Wildlife species

### 3.5 List any visually sensitive areas and the measures to be taken at these areas.

See Handbook — [Visual Sensitive Areas](#) for requirements.

None Identified

### 3.6 List areas with cultural resources and the measures to be taken in those areas.

See Handbook – [Cultural Resources](#) for requirements.

None listed or ID

### 3.7 List areas with steep slopes or potential erosion areas and the measure and methods to be applied in those areas.

See Handbook – [Steep/Unstable Slopes](#) for requirements.

LOCATION			(1)	(2)	(3)		
STR. NO.	FROM	TO	WIDTH	LENGTH	ACRES		
CO							
6/1	0	450		450	0.5	Y	Pasture and farmed area w/interspersed trees.
6/1	650	1277		627	0.1	Y	
6/2	0	450		450	0.2	Y	
6/2	650	1025	150.0	375	1.3	Y	
7/5	1150	1355	150.0	205	0.7	Y	
9/2	69	350	150.0	281	1.0	Y	
9/2	1100	1800	150.0	700	2.4	Y	
9/3	0	472	150.0	472	1.6	Y	INTERMITTENT WATER AT DRAWS
9/4	0	1350	150.0	1350	4.6	Y	INTERMITTENT WATER AT DRAWS
10/2	0	1150	150.0	1150	4.0	Y	INTERMITTENT WATER AT DRAWS
10/3	0	350	150.0	350	1.2	Y	
10/3	850	1438	150.0	588	2.0	Y	
10/4	0	1661	150.0	1661	5.7	Y	INTERMITTENT WATER AT DRAWS
10/5	0	550	150.0	550	1.9	Y	
10/5	850	1100	150.0	250	0.9	Y	
11/1	600	1200	150	600	2.1	Y	
11/2	0	625	150.0	625	2.2	Y	
11/2	1050	1576	150.0	526	1.8	Y	
11/3	0	600	150.0	600	2.1	Y	
12/1	890	1145	150.0	255	0.9	Y	
12/2	0	945	150.0	945	3.3	Y	
12/3	0	985	150.0	985	3.4	Y	
12/4	0	250	150.0	250	0.9	Y	
13/1	0	750	150.0	750	2.6	Y	
14/4	1000	1553	150.0	553	1.9	Y	
19/2	1350	1725	150.0	375	1.3	Y	STATE 19/2+797 TO 19/2+1725
19/2	1725	1800	150.0	75	0.3	Y	PVT
21/4	275	1057	150.0	782	2.7	Y	
22/3	0	300	150.0	300	1.0	Y	
24/1	0	1363	150.0	1363	4.7	Y	INTERMITTENT WATER AT DRAWS
24/2	0	375	150.0	375	1.3	Y	
25/1	0	550	150.0	550	1.9	Y	
27/4	950	1100	150.0	150	0.5	Y	
28/3	600	975	150.0	375	1.3	Y	
28/4	0	150	150.0	150	0.5	Y	

LOCATION			(1)	(2)	(3)	Y	
STR. NO.	FROM	TO	WIDTH	LENGTH	ACRES		
28/4	300	1354	150.0	1054	3.6	Y	

## STEEP SLOPES CODE Y ON CUTSHEET

**Manual:** Hand tools and chainsaws

**Mechanical:** Can be used on roads and towers, No Ground disturbing activities on steep slopes

**Herbicide:** Glyphosate, Picloram, Imazapyr, 2,4-d, Triclopyr (Garlon 3A and Garlon 4), Dicamba may be prescribed for cut-stump, stem-injection, and basal-stem treatments, as well as for spot-foliar, cut stubble, and ground broadcast-foliar treatments. In addition, Escort and clopyralid can be used for spot foliar and broadcast treatments.

### 3.8 List areas of spanned canyons and the type of cutting needed.

See Handbook – [Spanned Canyons](#) for requirements.

6/1	450	650	200	STC	From 6/1 to 6/2 check area for tall growing trees and
6/2	450	650	200	STC	Hocolm Ck
7/1	550	1050	500	STC	Rock Creek
9/2	350	1100	750	STC	Jackson Creek
10/3	350	850	500	STC	E. Fork McKay
10/5	550	850	300	STC	
11/2	625	1050	425	STC	
11/3	600	875	275	STC	
12/4	250	575	325	STC	
13/1	750	1000	250	STC	
14/4	100	1000	900	STC	
16/1	736	949	213	STC	
19/2	797	1350	553	STC	STATE 19/2+797 TO 19/2+1725
21/4	120	275	155	STC	
22/3	300	650	350	STC	
23/3	200	900	700	STC	
24/2	375	1350	975	STC	East Fork Nehelum T&E
25/1	550	622	72	STC	
25/4	600	825	225	STC	
25/4	825	1524	699	STC	
26/6	400	456	56	STC	
27/4	790	950	160	STC	
28/3	150	600	450	STC	
28/4	150	300	150	STC	

## STEEP CANYONS CODE “STC” ON CUT SHEET

Any areas in the corridor with greater than 38.1 m (125 ft.) vertical distance between the ground surface and transmission lines. Here, removal is periodically required only of individual trees (single tree cuts) that could encroach into the transmission corridor danger zone.

In areas adjacent to STC zones the following treatment will be required. In the area where the conductor clearance is from 70 feet to 125 feet tall growing trees will be controlled in the following manner.

1. All conifers over 14 feet tall will be controlled. Conifers over 25 feet tall will be cut for clearance.

2. Hardwood trees over 30 feet tall will be cut for clearance and treated.
3. Hardwood trees less than 30 feet tall will be left untreated.

**Herbicides: NONE.**

#### 4. DETERMINE VEGETATION CONTROL METHODS

See Handbook — [Methods](#)

##### 4.1 List Methods that will be used in areas not previously addressed in steps above.

See Handbook — [Manual](#), [Mechanical](#), [Biological](#), [Herbicides](#) for requirements for each of the methods.

#### NO ENVIRONMENTAL CONSTRAINTS CODE “A” ON CUT SHEET

State Forest or private lands with no environmental constraints. Available: all manual, mechanical, biological, and herbicidal treatments

**Manual:** Hand tools and chainsaws

**Mechanical:** Can be used on roads and towers, all areas suitable for mechanical treatment. No Ground disturbing activities on slopes over 20%

**Herbicide:** Glyphosate, Picloram, Imazapyr, picloram, 2,4-d, Triclopyr (Garlon 3A and Garlon 4), Dicamba may be prescribed for cut-stump, stem-injection, and basal-stem treatments, as well as for spot-foliar, cut stubble, and broadcast-foliar treatments. In addition, Escort and clopyralid can be used for spot foliar and broadcast treatments.

BLM-administered land, including Late Successional Reserve (LSR)<sup>1</sup>, with no other environmental constraints. Available: all manual, mechanical, and biological.

**Manual:** Hand tools and chainsaws

**Mechanical:** Can be used on roads and towers, all areas suitable for mechanical treatment. No Ground disturbing activities on slopes over 20%

LOCATION			(1) WIDTH	(2) LENGT H	(3) ACRE S	ROAD ACRE S	IVM ACRE S	ZONE	STR #	BLM ACRE S	STAT E AC	CONTROL PRESCRIPTION (REMARKS)
STR. NO.	FROM	TO										
5/1	0	700		700	0.7		0.7	A	1.0			Pasture and farmed area w/interspersed trees
5/2	0	1005		1005	0.7		0.7	A	1.0			From 5/1 to 6/1 check area for tall growing trees and
5/3	0	1090		1090	0.2		0.2	A	1.0			Clear structures. Approx 1.25 acres
5/4	0	1239		1239	0.2		0.2	A	1.0			
5/5	0	1082		1082	0.1		0.1	A	1.0			
6/3	0	950	150.0	950	3.3		3.3	A	1.0			
6/4	0	725	150.0	725	2.5		2.5	A	1.0			
6/5	0	1087	150.0	1087	3.7		3.7	A	1.0			
7/1	0	550	150.0	550	1.9		1.9	A	1.0			
7/1	1300	1587	150.0	287	1.0		1.0	A				
7/2	0	700	150.0	700	2.4		2.4	A	1.0			
7/3	0	875	150.0	875	3.0		3.0	A	1.0			
7/4	0	725	150.0	725	2.5		2.5	A	1.0			
7/5	0	750	150.0	750	2.6		2.6	A	1.0			
8/1	0	820	150.0	820	2.8		2.8	A	1.0			
8/2	0	925	150.0	925	3.2		3.2	A	1.0			
8/3	0	1213	150.0	1213	4.2		4.2	A	1.0			
9/5	0	558	150.0	558	1.9		1.9	A	1.0			
10/1	0	441	150.0	441	1.5		1.5	A	1.0			
11/3	1650	1796	150.0	146	0.5		0.5	A				
11/4	0	860	150.0	860	3.0		3.0	A	1.0			
12/1	0	690	150.0	690	2.4		2.4	A	1.0			

LOCATION			(1) WIDTH	(2) LENGT H	(3) ACRE S	ROAD ACRE S	IVM ACRE S	ZONE	STR #	BLM ACRE S	STAT E AC	CONTROL PRESCRIPTION (REMARKS)
STR. NO.	FROM	TO										
12/4	1220	1740	150.0	520	1.8		1.8	A				
13/1	1000	1600	150	600	2.1		2.1	A				
13/2	0	425	150.0	425	1.5		1.5	A	1.0			
13/3	0	532	150.0	532	1.8		1.8	A	1.0			
13/3	1605	1775	150.0	170	0.6		0.6	A				
13/4	0	1064	150.0	1064	3.7		3.7	A	1.0			INTERMITTENT WATER AT DRAWS
13/5	0	350	150.0	350	1.2		1.2	A	1.0			
13/5	600	1085	150.0	485	1.7		1.7	A				
14/1	0	825	150.0	825	2.8		2.8	A	1.0			
14/1	1125	1230	150.0	105	0.4		0.4	A				
14/2	0	1197	150.0	1197	4.1		4.1	A	1.0			INTERMITTENT WATER AT DRAWS
14/3	0	1123	150.0	1123	3.9		3.9	A	1.0			
14/4	0	100	150.0	100	0.3		0.3	A	1.0			
15/1	0	1011	150.0	1011	3.5		3.5	A				
15/2	0	1006	150.0	1006	3.5		3.5	A	1.0			
15/3	0	994	150.0	994	3.4		3.4	A	1.0			
15/4	0	1008	150	1008	3.5		3.5	A	1.0			
15/5	0	1031	150.0	1031	3.6		3.6	A	1.0			
16/1	0	736	150.0	736	2.5		2.5	A	1.0			
16/3	1205	1325	150.0	120	0.4		0.4	A				
16/4	0	910	150.0	910	3.1		3.1	A	1.0			
16/5	0	1390	150.0	1390	4.8		4.8	A	1.0			INTERMITTENT WATER AT DRAWS
18/1	250	548	150.0	298	1.0		1.0	A				
18/2	0	1266	150	1266	4.4		4.4	A	1.0			
18/3	471	1150	150.0	679	2.3		2.3	A			2.30	OR STATE FORESTRY 18/3+471 TO 18/5+872
18/4	0	575	150.0	575	2.0		2.0	A			2.00	OR STATE FORESTRY
18/5	0	872	150.0	872	3.0		3.0	A			3.00	OR STATE FORESTRY
19/3	0	258	150.0	258	0.9		0.9	A				
19/4	0	484	150.0	484	1.7		1.7	A				
19/5	0	168	150.0	168	0.6		0.6	A				
20/1	397	550	150.0	153	0.5		0.5	A				
20/2	0	223	150.0	223	0.8		0.8	A	1.0			
21/3	1297	1387	150.0	90	0.3		0.3	A				
21/4	0	120	150.0	120	0.4		0.4	A	1.0			
22/1	0	1192	150.0	1192	4.1		4.1	A	1.0			
22/2	0	1000	150.0	1000	3.4		3.4	A	1.0			
22/3	650	1299	150.0	649	2.2		2.2	A				INTERMITTENT WATER AT DRAWS
22/4	0	695	150	695	2.4		2.4	A	1.0			INTERMITTENT WATER AT DRAWS
23/4	600	850	150.0	250	0.9		0.9	A				
23/5	0	1461	150.0	1461	5.0		5.0	A	1.0			INTERMITTENT WATER AT DRAWS
24/3	0	925	150.0	925	3.2		3.2	A	1.0			
24/4	0	725	150.0	725	2.5		2.5	A	1.0			
25/2	304	667	150.0	363	1.3		1.3	A				
25/3	0	641	150.0	641	2.2		2.2	A	1.0			
25/4	0	600	150.0	600	2.1		2.1	A	1.0			
25/5	0	650	150.0	650	2.2		2.2	A	1.0			
26/1	0	650	150.0	650	2.2		2.2	A	1.0			
26/2	0	1175	150.0	1175	4.0		4.0	A	1.0			
26/3	0	757	150.0	757	2.6		2.6	A	1.0			
26/4	0	1017	150.0	1017	3.5		3.5	A	1.0			
26/5	0	919	150.0	919	3.2		3.2	A	1.0			

LOCATION			(1)	(2)	(3)	ROAD	IVM			BLM	STAT	CONTROL PRESCRIPTION (REMARKS)
STR. NO.	FROM	TO	WIDTH	LENGT H	ACRE S	ACRE S	ACRE S	ZONE	STR #	ACRE S	E AC	
26/6	0	400	150.0	400	1.4		1.4	A	1.0			
28/1	0	750	150.0	750	2.6		2.6	A	1.0			
28/2	0	1125	150.0	1125	3.9		3.9	A	1.0			
28/3	0	150	150.0	150	0.5		0.5	A	1.0			
28/5	0	781	150.0	781	2.7		2.7	A	1.0			

## APPLICATION METHOD DESCRIPTIONS

**Manual control methods** include the following: pulling weeds; cutting with shears, clippers, chainsaws, brush saws, or axes; and girdling by cutting a ring around the trunk of the tree.

**Mechanical methods** include the use of chopper/shredders, walking brush controllers, mowers, feller-buncher machines, roller-choppers, and blading.

### Spot Herbicide Application

A spot application treats individual plant(s) with the least amount of chemicals possible. The methods include, but are not limited, to the following:

- **Stump treatments.** Herbicide is applied by hand (squirt bottle) or backpack to freshly cut stumps of broadleaf trees and shrubs to prevent re-sprouting.
- **Injection and notch treatments.** Herbicide is injected into the tree around the base using tubular injectors (lances); or herbicide is squirted or sprayed into frills, notches, or cups chopped around the base of individual trees or shrubs. These very selective treatments are only used for specific trees or shrubs and within sensitive areas such as near water.
- **Wick and carpet roller applications.** The herbicide is wiped on the plant(s) (noxious weeds) using hand held or equipment mounted rope wicks, sponges, fiber covered wipers, or carpet wiper designs. This application device uses saturated ropes, wick or sponges that are used to apply the herbicide selectively on the plant. This method is effective where drift or sensitive water sources are a concern.

### Localized Herbicide Application

“Localized” herbicide application is the treatment of individual or small groupings of plants. This application method is normally used only in areas of low-to-medium target-plant density.

The application methods for this application group include, but are not limited to, the following:

- **Basal treatment.** The herbicides are applied by hand (squirt bottle) or by backpack. Herbicides are applied at the base of the plant (the bark or stem) from the ground up to knee height. The herbicide is usually mixed with an oil carrier to enhance penetration through the bark, and applied to the point short of run-off. These treatments can be done during the dormant season or active growing season.
- **Low-volume foliar treatment.** Herbicides are applied with the use of a backpack sprayer, all terrain vehicle (ATV), or tractor with a spray gun. Herbicide is applied to the foliage of individual or clumps of plants during the growing season, just enough to wet them lightly. A relatively high percentage of herbicide is used mixed with water. Thickening agents are added where necessary to control drift. Dyes may also be added to see easily what areas have been treated.
- **Localized granular application.** Granular or pellet forms of herbicide are hand-applied to the soil surface beneath the drip lines of an individual plant, or as close to a tree trunk or stem base as possible. Herbicide is applied when there is enough moisture to dissolve and carry the herbicide to the root zone—but not so much water that it washes the granules off-site.

## Broadcast Ground Herbicide Application

Broadcast herbicide applications treat an area, rather than individual plants. Broadcast applications are used to treat rights-of-way that are thickly vegetated (heavy stem density), access roads, and noxious weeds. The application methods for this group include, but are not limited to, the following:

- **High-volume foliar treatments.** Herbicides are applied by truck, ATV, or tractor with a spray gun, broadcast nozzle, or boom. A hydraulic sprayer mounted on a rubber-tired tractor or truck or tracked-type tractor is used to spray foliage and stems of target vegetation with a mixture of water and a low percentage of herbicide. The herbicide mixture is pumped through hoses to a hand-held nozzle. A worker activates the nozzle and directs the spray to the target vegetation. Boom application methods involve a fixed nozzle or set of nozzles that spray a set width as the tractor passes over an area.
- **Cut-stubble treatment.** Herbicide is sprayed from a truck with a mounted boom over large swaths of freshly mechanically cut areas. This treatment is the broadcast style of cut-stump treatments. It is intended to keep plants from re-sprouting.

## 5. DETERMINE DEBRIS DISPOSAL AND REVEGETATION

### 5.1 Describe the debris disposal methods to be used and any special considerations.

See Handbook — [Debris disposal](#) for a checkbox list and requirements.

Debris Disposal:

Lop and Scatter (Branches of a fallen tree are cut off (lopped) by ax or chainsaw, so the tree trunk lies flat on the ground. The trunks are occasionally cut in 1-to-2-m (4-to-8-ft.) lengths. The cut branches and trunks are then scattered on the ground, laid flat, and left to decompose.)

Mulch

(Mulching is a debris treatment that falls between chipping and lop-and-scatter. The debris is cut into 1-to-2-ft. lengths, scattered on the right-of-way and left to decompose. This method is used when terrain and conditions do not allow the use of mechanical chipping equipment.)

### 5.2 List areas of reseeding or replanting (those areas not already described in steps 1, 2, or 3).

See Handbook — [Reseeding/replanting](#) for requirements.

If Re-Seeding is needed Mixtures of the following grasses would be beneficial

	Native
California Brome (Bromus carinatus)	y
Sheep fescue (Festuca ovina)	y
Blue wildrye (Elymus glaucus)	y
Canada bluegrass (Poa compressa)	y
Smooth Brome	n
Perennial Ryegrass	n
Big Bluegrass	y
Clovers	n
Alfalfa	n
Sickle-keeled lupine 5 oz./100# seed	y
And/or Lupinus bicolor 5 oz./100# seed	y
America vetch (Vicia Americana)	y

### 5.3 If not using native seed/plants, describe why.

Native will be considered in all mixes. Introduced species are more competitive against invading tall tree species

### 5.4 Describe timing and any follow-up that will need to take place to ensure germination/success of seeding/planting.

Seeding should be completed when there is enough moisture to allow for 2 months of growth.

Seeding can be completed any time of the year except for the hot summer months.

## 6. DETERMINE MONITORING NEEDS

See handbook — [Monitoring](#) for requirements.

**6.1 Describe the follow-up/monitoring cycle that will be used to evaluate the effectiveness of the vegetation control methods used.**

Site will be inspected during treatment. In addition routine patrols by BPA ground and aerial patrols

**6.2 Describe any follow-up or monitoring needed to determine if mitigation measures were effective.**

Routine patrols by BPA ground and aerial patrols

## 7. PREPARE APPROPRIATE ENVIRONMENTAL DOCUMENTATION

See handbook — [Prepare Appropriate Environmental Documentation](#) for requirements. . Also prepare Supplement Analysis — [Supplement Analysis](#) — for signature.

**7.1 Describe any potential project impacts or project work that are different than those disclosed in the Transmission System Vegetation Management Program EIS. Describe how those differences impact natural resources and if the differences are “substantial”.**

None

**7.2 Is there a need for additional NEPA documentation (i.e. Forest Service requirement, Record of Decision, supplemental EIS)? If so, attach.**

no